AIR QUALITY PERMIT

Issued To: Williston Basin Interstate
Pipeline Company
Baker Compressor Station
P.O. Box 131
Glendive, MT 59330

Permit: #2954-01
Administrative Amendment (AA)
Request Received: 01/08/04
Department's Decision on AA: 03/04/04
Permit Final: 03/20/04
AFS: #025-0010A

An air quality permit, with conditions, is hereby granted to Williston Basin Interstate Pipeline Company (WBI), pursuant to Sections 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.701, *et seq*., as amended, for the following:

SECTION I: Permitted Facilities

A. Plant Location

WBI owns and operates a natural gas compressor station known as the Baker Compressor Station. The facility is located on Highway 12, east of Baker, Montana. The legal description of the facility is the Southeast ¼, of the Southeast ¼, of Section 12, Township 7 North, Range 59 East in Fallon County, Montana.

B. Current Permit Action

On January 8, 2004, the Department of Environmental Quality – Air Resources Management Bureau (Department) received an administrative amendment request from WBI. WBI requested that the Department make emission offsets from the 1,680-Horsepower (Hp) Waukesha Compressor Engine a federally enforceable permit condition to allow WBI the flexibility to "swap" 1,680-Hp Waukesha compressor engines at the facility. The current permit action incorporates WBI's request into the permit.

SECTION II. Conditions and Limitations

A. Emission Limitations

1. WBI shall not operate more than one 1,680-Hp Waukesha Compressor Engine at any given time. The engine shall have a minimum stack height of 18 feet above ground level and emissions from the engine shall be controlled with a Non-Selective Catalytic Reduction (NSCR) Unit and an Air to Fuel Ratio (AFR) controller. Emissions from the 1,680-Hp Waukesha Compressor Engine shall not exceed the following (ARM 17.8.749 and ARM 17.8.752):

Oxides of Nitrogen (NO_x)[1]	7.41 pounds per hour (lb/hr)
Carbon Monoxide (CO)	11.11 lb/hr
Volitile Organic Compounds (VOC)	3.70 lb/hr

2. NO_x emissions from each of the two 330-Hp Ingersoll-Rand Compressor Engines shall be limited to 9.1 lb/hr (ARM 17.8.749).

[1] NO_x reported as NO_2

3. Each of the three 540-Hp Cooper-Bessemer Compressor Engines and each of the two 330-Hp Ingersoll-Rand Compressor Engines shall have a minimum stack height of 35 feet above ground level (ARM 17.8.749).

4. WBI shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any sources installed on or before November 23, 1968, that exhibit an opacity of 40% or greater averaged over 6 consecutive minutes (ARM 17.8.304).

5. WBI shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any sources installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304).

6. WBI shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308).

7. WBI shall treat all unpaved portions of the haul roads, access roads, parking lots, or general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the reasonable precautions limitation in Section II.A.6 (ARM 17.8.749).

B. Testing Requirements

1. WBI shall test the 1,680-Hp Waukesha Compressor Engine for NO_x and CO, concurrently, to demonstrate compliance with the NO_x and CO emission limits contained in Section II.A.1 within 180 days of initial start-up of the engine. Further testing shall occur on an every-4-year basis or according to another testing/monitoring schedule as may be approved by the Department (ARM 17.8.105 and ARM 17.8.749).

2. WBI shall test each of the two 330-Hp Ingersoll-Rand Compressor Engines for NO_x to demonstrate compliance with the NO_x emission limits contained in Section II.A.2 within 180 days of the initial start-up date of the 1,680-Hp Waukesha Compressor Engine. Further testing shall occur on an every 4-year basis or according to another testing/monitoring schedule as may be approved by the Department (ARM 17.8.105 and ARM 17.8.749).

3. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).

4. The Department may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. WBI shall supply the Department with annual production information for all emission points, as required by the Department in the annual emission inventory request. The request will include, but is not limited to, all sources of emissions identified in the emission inventory contained in the permit analysis.

   Production information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request. Information shall be in the units required by the Department. This information may be used to calculate operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

2. WBI shall notify the Department of any construction or improvement project conducted pursuant to ARM 17.8.745, that would include a change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location or fuel specifications, or would result in an increase in source capacity above its permitted operation or the addition of a new emission unit. The notice must be submitted to the Department, in writing, 10 days prior to start up or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(1)(d) (ARM 17.8.745).

3. All records compiled in accordance with this permit must be maintained by WBI as a permanent business record for at least 5 years following the date of the measurement, must be available at the plant site for inspection by the Department, and must be submitted to the Department upon request (ARM 17.8.749).

SECTION III: General Conditions

A. Inspection – WBI shall allow the Department's representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment (CEMS, CERMS) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.

B. Waiver – The permit and the terms, conditions, and matters stated herein shall be deemed accepted if WBI fails to appeal as indicated below.

C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving WBI of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq*. (ARM 17.8.756).

D. Enforcement – Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties or other enforcement action as specified in Section 75-2-401, *et seq*., MCA.

E. Appeals – Any person or persons jointly or severally adversely affected by the Department's decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefore, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The Department's decision on the application is not final unless 15 days have elapsed and there is no request for a hearing under this section. The filing of a request for a hearing postpones the effective date of the Department's decision until conclusion of the hearing and issuance of a final decision by the Board.

F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy the air quality permit shall be made available for inspection by the Department at the location of the source.

G. Permit Fee – Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, failure to pay the annual operation fee by WBI may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.

Permit Analysis
Williston Basin Interstate Pipeline Company
Baker Compressor Station
Permit #2954-01

I. Introduction/Process Description

A. Permitted Equipment

Williston Basin Interstate Pipeline Company (WBI) owns and operates a natural gas compressor station known as the Baker Compressor Station. The facility is located on Highway 12, east of Baker, Montana. The legal description of the facility is the Southeast ¼, of the Southeast ¼, of Section 12, Township 7 North, Range 59 East in Fallon County, Montana. WBI's Baker Compressor Station consists of the following equipment:

1. Three 540-Horsepower (Hp) Cooper-Bessemer Compressor Engines. One of the engines was installed in 1955 and the other two engines were installed in 1957.

2. Two 330-Hp Ingersoll Rand Compressor Engines. Both of the engines were installed in 1964.

3. One 1,680-Hp Waukesha Compressor Engine installed in 2003.

4. Miscellaneous Tanks including:

    a. One 1,000-gallon septic tank
    b. One 1,000-gallon used oil tank
    c. One 13,230-gallon hydrocarbon condensate tank
    d. Three 657-gallon new oil tanks
    e. One 1,000-gallon ethylene glycol tank
    f. One 2,300-gallon waste water tank
    g. One 16,800-gallon slop oil tank
    h. One 4,512-gallon slop oil tank

5. Building and process heaters including:

    a. One 3.0-million British thermal unit per hour (MMBtu/hr) direct fired dehydration unit regenerator (reboiler)
    b. Two 0.15-MMBtu/hr Armstrong Space Heaters
    c. One 0.065-MMBtu/hr AO Smith Water Heater
    d. Three 0.0075-MMBtu/hr Gorgon Ray Radiant Space Heaters
    e. One 1.26-MMBtu/hr Mueller Steam Boiler (Space Heating)
    f. One 0.05-MMBtu/hr Modine Space Heater
    g. Three 0.018-MMBtu/hr Bruest Catalytic Radiant Space Heaters
    h. Two 0.125-MMBtu/hr ITT Grinnell Aerothermes
    i. Three 0.2-MMBtu/hr Janitrol Space Heaters
    j. One 0.05-MMBtu/hr Town Border Station Space Heater
    k. One 0.125-MMBtu/hr Enerteck Tank Heater
    l. Fugitive VOC emissions from valves, flanges, open-ended lines, and pump seals

B. Source Description

The facility has two primary purposes. The first is to pump the field gas up to the required pressure in the natural gas transmission system. Compression of the gas is accomplished using the natural gas fired compressors described above. Various building and process heaters provide heat to the various station facilities and processes.

The second purpose of the facility is to "dry" the gas as it is being processed. The gas contains moisture, which must be removed from the system prior to being sent into the transmission system. This is accomplished with the dehydrator, also commonly called a reboiler or glycol unit. The gas is treated with a glycol solution, which absorbs the water in the gas stream. The glycol solution is then heated to about 300 degrees Fahrenheit (^{o}F) to drive off the water and return the glycol. The water that is driven off is released to the atmosphere. The heat necessary for this activity is generated by burning natural gas in the dehydrator reboiler. This unit will have a heat input of approximately 0.30 MMBtu/hr. The reboiler is small by industrial standards, having a size approximately equivalent to a typical natural gas-fired small office heating system. After dehydration, some of the dry natural gas is used as fuel in the fuel burning equipment at the facility.

C. Permit History

Prior to January 24, 2003, WBI was exempt from the requirements to obtain a preconstruction permit because the facility was constructed and operating prior to November 23, 1968. However, on November 26, 2003, WBI submitted a complete Montana Air Quality Permit Application proposing to install a 1,680-Hp Waukesha Compressor Engine that has the potential to emit greater than 25 tons per year.

While the Baker Compressor Station is a major source as defined under the New Source Review (NSR) program, the installation of the 1,680-Hp Waukesha Compressor Engine did not trigger the NSR program because the Potential to Emit (PTE) of the 1,680-Hp Waukesha Compressor Engine is below the Prevention of Significant Deterioration (PSD) significant levels. On January 24, 2003, Permit **#2954-00** became final.

D. Current Permit Action

On January 8, 2004, the Department of Environmental Quality – Air Resources Management Bureau (Department) received an administrative amendment request from WBI. WBI requested that the Department make emission offsets from the 1,680-Horsepower (Hp) Waukesha Compressor Engine a federally enforceable permit condition to allow WBI the flexibility to "swap" 1,680-Hp Waukesha compressor engines at the facility. The current permit action incorporates WBI's request into the permit. Permit **#2954-01** replaces Permit #2954-00.

E. Additional Information

Additional information, such as applicable rules and regulations, Best Available Control Technology (BACT)/Reasonably Available Control Technology (RACT) determinations, air quality impacts, and environmental assessments, is included in the analysis associated with each change to the permit.

II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the Administrative Rules of Montana (ARM) and are available, upon request, from the Department. Upon request, the Department will provide references for location of complete copies of all applicable rules and regulations or copies where appropriate.

A. ARM 17.8, Subchapter 1 – General Provisions, including but not limited to:

1. ARM 17.8.101 Definitions. This rule includes a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.

2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment (including instruments and sensing devices), and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the Department.

3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, any source or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq*., Montana Code Annotated (MCA).

   WBI shall comply with the requirements contained in the Montana Source Test Protocol and Procedures Manual, including, but not limited to, using the proper test methods and supplying the required reports. A copy of the Montana Source Test Protocol and Procedures Manual is available from the Department upon request.

4. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation or to continue for a period greater than 4 hours.

5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means that, without resulting in reduction of the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner as to create a public nuisance.

B. ARM 17.8, Subchapter 2 – Ambient Air Quality, including, but not limited to the following:

1. ARM 17.8.204 Ambient Air Monitoring
2. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
5. ARM 17.8.213 Ambient Air Quality Standard for Ozone
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide
7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
8. ARM 17.8.221 Ambient Air Quality Standard for Visibility
9. ARM 17.8.222 Ambient Air Quality Standard for Lead
10. ARM 17.8.223 Ambient Air Quality Standard for PM_{10}

WBI must maintain compliance with the applicable ambient air quality standards.

C. ARM 17.8, Subchapter 3 – Emission Standards, including, but not limited to:

1. ARM 17.8.304 Visible Air Contaminants. (1) This rule requires that no person may cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed on or before November 23, 1968, that exhibit an opacity of 40% or greater averaged over 6 consecutive minutes. (2) This rule requires that no person may cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.

2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate matter. (2) Under this rule, WBI shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.

3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause, allow or permit to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this rule.

4. ARM 17.8.310 Particulate Matter, Industrial Process. This rule requires that no person shall cause, allow or permit to be discharged into the atmosphere particulate matter in excess of the amount set forth in this rule.

5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. (4) Commencing July 1, 1972, no person shall burn liquid or solid fuels containing sulfur in excess of 1 pound of sulfur per million Btu fired. (5) Commencing July 1, 1971, no person shall burn any gaseous fuel containing sulfur compounds in excess of 50 grains per 100 cubic feet of gaseous fuel, calculated as hydrogen sulfide at standard conditions. WBI will utilize pipeline quality natural gas in their fuel burning equipment, which will meet this limitation.

6. ARM 17.8.324 Hydrocarbon Emissions--Petroleum Products. (3) No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank is equipped with a vapor loss control device as described in (1) of this rule.

7. ARM 17.8.340 Standard of Performance for New Stationary Sources and Emission Guidelines for Existing Sources. This rule incorporates, by reference, 40 CFR 60, Standards of Performance for New Stationary Sources (NSPS). This facility is not an NSPS affected source because it does not meet the definition of any NSPS subpart defined in 40 CFR 60.

   The WBI facility is not an NSPS affected source because it does not meet the definition of a natural gas processing plant defined in 40 CFR 60, Subpart KKK.

8. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. The source, as defined and applied in 40 CFR 63, shall comply with the requirements of 40 CFR 63, as listed below:

   40 CFR 63, Subpart HH National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities. Owners or operators of oil and natural gas production facilities, as defined and applied in 40 CFR Part 63, shall comply with the standards and provisions of 40 CFR Part 63, Subpart HH. Based on information submitted to the Department, which included a complete Hazardous Air Pollutant (HAP) emission inventory, the WBI facility is not a National Emission Standards for Hazardous Air Pollutants (NESHAP) affected source because the facility does not meet the definition of a major source of HAPs as defined in 40 CFR Part 63, Subpart HH.

   40 CFR 63, Subpart HHH National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities. Owners or operators of natural gas transmission or storage facilities, as defined and applied in 40 CFR Part 63, shall comply with the standards and provisions of 40 CFR Part 63, Subpart HHH. Based on information submitted to the Department, which included a complete HAP emission inventory, the WBI facility is not a NESHAP affected source because the facility does not meet the definition of a major source of HAPs as defined in 40 CFR Part 63, Subpart HHH.

D. ARM 17.8, Subchapter 4 – Stack Height and Dispersion Techniques, including, but not limited to:

1. ARM 17.8.401 Definitions. This rule includes a list of definitions used in this chapter, unless indicated otherwise in a specific subchapter.

2. ARM 17.8.402 Requirements. WBI must demonstrate compliance with the ambient air quality standards with a stack height that does not exceed Good Engineering Practices (GEP). There are no new or altered stacks associated with the current permit action.

E. ARM 17.8, Subchapter 5 – Air Quality Permit Application, Operation and Open Burning Fees, including, but not limited to:

1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that an applicant submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the Department. WBI was not required to submit a permit application fee for the current permit action because it is an administrative action.

2. ARM 17.8.505 When Permit Required--Exclusions. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit (excluding an open burning permit) issued by the Department. The air quality operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

   An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions that prorate the required fee amount.

F. ARM 17.8, Subchapter 7 – Permit, Construction and Operation of Air Contaminant Sources, including, but not limited to:

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.

2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an air quality permit or permit modification to construct, alter or use any air contaminant sources that have the PTE greater than 25 tons per year of any pollutant. WBI's Baker Compressor Station has the potential to emit more than 25 tons per year of NO_x and CO; therefore, an air quality permit is required.

3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.

4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.

5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, alteration or use of a source. However, the current permit action will not result in an increase of

emissions from the facility and is considered an administrative action; therefore, WBI was not required to submit a permit application. (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. However, the current permit action will not result in an increase of emissions from the facility and is considered an administrative action; therefore, WBI was not required to publish a public notice.

6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.

7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. The BACT analysis is discussed in Section III of this permit analysis.

8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.

9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving WBI of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq*.

10. ARM 17.8.759 Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.

11. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or altered source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.

12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).

13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.

14. ARM 17.8.765 Transfer of Permit. This rule states that an air quality permit may be transferred from one person to another if written notice of Intent to Transfer, including the names of the transferor and the transferee, is sent to the Department.

G. ARM 17.8, Subchapter 8 – Prevention of Significant Deterioration of Air Quality, including, but not limited to:

1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.

2. ARM 17.8.818 Review of Major Stationary Sources and Major Modifications--Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification, with respect to each pollutant subject to regulation under the Federal Clean Air Act (FCAA) that it would emit, except as this subchapter would otherwise allow.

This facility is not a listed source, but NO_x and CO emissions are greater than or equal to 250 tons per year; therefore, the facility is major. This administrative amendment will not increase emission levels and, therefore, does not require a New Source Review (NSR) analysis.

H. ARM 17.8, Subchapter 10 – Preconstruction Permit Requirements for Major Stationary Sources or Modifications Located Within Attainment or Unclassified Areas, including, but not limited to:

ARM 17.8.1004 When Air Quality Preconstruction Permit Required. This administrative amendment is not a major modification. Therefore, the requirements of this subchapter do not apply.

I. ARM 17.8, Subchapter 12 – Operating Permit Program Applicability, including, but not limited to:

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any source having:

a. PTE > 100 tons/year of any pollutant;

b. PTE > 10 tons/year of any one HAP, PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as the Department may establish by rule; or

c. PTE > 70 tons/year of PM_{10} in a serious PM_{10} nonattainment area.

2. ARM 17.8.1204 Air Quality Operating Permit Program. (1) Title V of the FCAA amendments of 1990 requires that all sources, as defined in ARM 17.8.1204(1), obtain a Title V Operating Permit. In reviewing and issuing Air Quality Permit #2954-01 for WBI, the following conclusions were made:

a. The facility's PTE is greater than 100 tons/year for NO_x and CO.

b. The facility's PTE is less than 10 tons/year for any one HAP and less than 25 tons/year for all HAPs.

c. This source is not located in a serious PM_{10} nonattainment area.

d. This facility is not subject to any current NSPS.

e. This facility is not subject to any current NESHAP standards.

f. This source is not a Title IV affected source, nor a solid waste combustion unit.

g. This source is not an EPA designated Title V source.

Based on these facts, the Department determined that WBI is a "major source" of emissions as defined under Title V. The final Title V Operating Permit #OP2954-01 for this facility was issued by the Department on August 9, 2003.

III. BACT Determination

A BACT determination is required for each new or altered source. WBI shall install on the new or altered source the maximum air pollution control capability, which is technically practicable and economically feasible, except that BACT shall be utilized. However, the current permit action will not result in an increase of emissions from the facility and is considered an administrative action; therefore, a BACT determination is not required.

IV. Emission Inventory

Source	Equipment Description	Emissions (tons/year)				
		PM_{10}	NO_x	CO	VOC	SO_x
#1	540-Hp Cooper Bessimer Compressor Engine	0.18	130.39	83.44	0.53	0.00
#2	330-Hp Ingersoll Rand Compressor Engine	0.13	39.86	50.98	0.39	0.00
#3	330-Hp Ingersoll Rand Compressor Engine	0.13	39.86	50.98	0.39	0.00
#4	540-Hp Cooper Bessimer Compressor Engine	0.18	130.39	83.44	0.53	0.00
#5	540-Hp Cooper Bessimer Compressor Engine	0.18	130.39	83.44	0.53	0.00
#6a - #6b	Direct Fired Dehydrator Reboiler & Still Vent	0.10	1.31	1.10	0.18	0.01
#7	Tanks (10)	0.00	0.00	0.00	0.08	0.00
#8	1,680-Hp Waukesha Compressor Engine	0.57	32.46	48.66	16.21	0.04
#9 - #26	Building and Process Heaters	0.09	1.17	0.99	0.06	0.01
#27	Fugitive VOC Emissions	0.00	0.00	0.00	0.39	0.00
Totals----------		1.56	505.83	403.03	19.29	0.06

(Source #1)
540-Hp Cooper Bessimer Compressor Engine

Parameters
Brake Horsepower: 540 BHp
Hours of Operation: 8760 hr/yr
Max Fuel Combustion Rate: 4.158 MMBtu/hr
Fuel Heating Value: 0.001 MMScf/MMBtu

PM_{10} Emissions
Emission Factor: 9.50 lb/MMScf (AP-42 Chapter 3, Table 3.2-3, 7/00)
Calculations: 9.50 lb/MMScf * 0.001 MMScf/MMBtu * 4.158 MMBtu/hr = 0.04 lb/hr
0.04 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.18 ton/yr

NO_x Emissions
Emission Factor: 25.00 gram/BHp-hr (Information from company-Title V Permit Application)
Calculations: 25.00 gram/BHp-hr * 540 BHp * 0.002205 lb/gram = 29.77 lb/hr
29.77 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 130.39 ton/yr

CO Emissions
Emission Factor: 16.00 gram/BHp-hr (Information from company-Title V Permit Application)
Calculations: 16.00 gram/BHp-hr *540 BHp * 0.002205 lb/gram = 19.05 lb/hr
19.05 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 83.44 ton/yr

VOC Emissions
Emission Factor: 29.60 lb/MMScf (Information from company-Title V Permit Application)
Calculations: 29.60 lb/MMScf * 0.001 MMScf/MMBtu * 4.158 MMBtu/hr = 0.12 lb/hr
0.12 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.53 ton/yr

SO_x Emissions
Emission Factor: 0.588 lb/MMScf (AP-42 Chapter 3, Table 3.2-3, 7/00)
Calculations: 0.588 lb/MMScf * 0.001 MMScf/MMBtu * 4.158 MMBtu/hr = 0.00 lb/hr
0.00 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.00 ton/yr

(Source #2)
330-Hp Ingersoll Rand Compressor Engine

Parameters
Brake Horsepower: 330 BHp
Hours of Operation: 8760 hr/yr
Max Fuel Combustion Rate: 3.30 MMBtu/hr
Fuel Heating Value: 0.001 MMScf/MMBtu

PM_{10} Emissions
Emission Factor: 9.50 lb/MMScf (AP-42 Chapter 3, Table 3.2-3, 7/00)
Calculations: 9.50 lb/MMScf * 0.001 MMScf/MMBtu * 3.30 MMBtu/hr = 0.03 lb/hr
0.03 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.13 ton/yr

NO_x Emissions
Emission Factor: 1.146 gram/sec (Requested by company-Based on modeling analysis)
Calculations: 1.146 gram/sec * 3600 sec/hr * 0.002205 lb/gram = 9.10 lb/hr
9.10 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 39.86 ton/yr

CO Emissions
Emission Factor: 16.00 gram/BHp-hr (Information from company-Title V Permit Application)
Calculations: 16.00 gram/BHp-hr * 330 BHp * 0.002205 lb/gram = 11.64 lb/hr
11.64 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 50.98 ton/yr

VOC Emissions
Emission Factor: 29.60 lb/MMScf (Information from company-Title V Permit Application)
Calculations: 29.60 lb/MMScf * 0.001 MMScf/MMBtu * 3.0 MMBtu/hr = 0.09 lb/hr
0.09 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.39 ton/yr

SO_x Emissions
Emission Factor: 0.588 lb/MMScf (AP-42 Chapter 3, Table 3.2-3, 7/00)
Calculations: 0.588 lb/MMScf * 0.001 MMScf/MMBtu * 3.0 MMBtu/hr = 0.00 lb/hr
0.00 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.00 ton/yr

(Source #3)
330-Hp Ingersoll Rand Compressor Engine

Parameters
Brake Horsepower: 330 BHp
Hours of Operation: 8760 hr/yr
Max Fuel Combustion Rate: 3.30 MMBtu/hr
Fuel Heating Value: 0.001 MMScf/MMBtu

PM_{10} Emissions
Emission Factor: 9.50 lb/MMScf (AP-42 Chapter 3, Table 3.2-3, 7/00)
Calculations: 9.50 lb/MMScf * 0.001 MMScf/MMBtu * 3.30 MMBtu/hr = 0.03 lb/hr
0.03 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.13 ton/yr

NO_x Emissions
Emission Factor: 1.146 gram/sec (Requested by company-Based on modeling analysis)
Calculations: 1.146 gram/sec * 3600 sec/hr * 0.002205 lb/gram = 9.10 lb/hr
9.10 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 39.86 ton/yr

CO Emissions
Emission Factor: 16.00 gram/BHp-hr (Information from company-Title V Permit Application)
Calculations: 16.00 gram/BHp-hr * 330 BHp * 0.002205 lb/gram = 11.64 lb/hr
11.64 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 50.98 ton/yr

VOC Emissions
Emission Factor: 29.60 lb/MMScf (Information from company-Title V Permit Application)
Calculations: 29.60 lb/MMScf * 0.001 MMScf/MMBtu * 3.0 MMBtu/hr = 0.09 lb/hr
0.09 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.39 ton/yr

SO_x Emissions
Emission Factor: 0.588 lb/MMScf (AP-42 Chapter 3, Table 3.2-3, 7/00)
Calculations: 0.588 lb/MMScf * 0.001 MMScf/MMBtu * 3.0 MMBtu/hr = 0.00 lb/hr
0.00 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.00 ton/yr

(Source #4)
540-Hp Cooper Bessimer Compressor Engine

Parameters
Brake Horsepower: 540 BHp
Hours of Operation: 8760 hr/yr
Max Fuel Combustion Rate: 4.158 MMBtu/hr
Fuel Heating Value: 0.001 MMScf/MMBtu

PM_{10} Emissions
Emission Factor: 9.50 lb/MMScf (AP-42 Chapter 3, Table 3.2-3, 7/00)
Calculations: 9.50 lb/MMScf * 0.001 MMScf/MMBtu * 4.158 MMBtu/hr = 0.04 lb/hr
0.04 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.18 ton/yr

NO_x Emissions
Emission Factor: 25.00 gram/BHp-hr (Information from company-Title V Permit Application)
Calculations: 25.00 gram/BHp-hr * 540 BHp * 0.002205 lb/gram = 29.77 lb/hr
29.77 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 130.39 ton/yr

CO Emissions
Emission Factor: 16.00 gram/BHp-hr (Information from company-Title V Permit Application)
Calculations: 16.00 gram/BHp-hr *540 BHp * 0.002205 lb/gram = 19.05 lb/hr
19.05 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 83.44 ton/yr

VOC Emissions
Emission Factor: 29.60 lb/MMScf (Information from company-Title V Permit Application)
Calculations: 29.60 lb/MMScf * 0.001 MMScf/MMBtu * 4.158 MMBtu/hr = 0.12 lb/hr
0.12 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.53 ton/yr

SO_x Emissions
Emission Factor: 0.588 lb/MMScf (AP-42 Chapter 3, Table 3.2-3, 7/00)
Calculations: 0.588 lb/MMScf * 0.001 MMScf/MMBtu * 4.158 MMBtu/hr = 0.00 lb/hr
0.00 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.00 ton/yr

(Source #5)
540-Hp Cooper Bessimer Compressor Engine

Parameters
Brake Horsepower: 540 BHp
Hours of Operation: 8760 hr/yr
Max Fuel Combustion Rate: 4.158 MMBtu/hr
Fuel Heating Value: 0.001 MMScf/MMBtu

PM_{10} Emissions
Emission Factor: 9.50 lb/MMScf (AP-42 Chapter 3, Table 3.2-3, 7/00)
Calculations: 9.50 lb/MMScf * 0.001 MMScf/MMBtu * 4.158 MMBtu/hr = 0.04 lb/hr
0.04 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.18 ton/yr

NO_x Emissions
Emission Factor: 25.00 gram/BHp-hr (Information from company-Title V Permit Application)
Calculations: 25.00 gram/BHp-hr * 540 BHp * 0.002205 lb/gram = 29.77 lb/hr
29.77 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 130.39 ton/yr

CO Emissions
Emission Factor: 16.00 gram/BHp-hr (Information from company-Title V Permit Application)
Calculations: 16.00 gram/BHp-hr *540 BHp * 0.002205 lb/gram = 19.05 lb/hr
19.05 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 83.44 ton/yr

VOC Emissions
Emission Factor: 29.60 lb/MMScf (Information from company-Title V Permit Application)
Calculations: 29.60 lb/MMScf * 0.001 MMScf/MMBtu * 4.158 MMBtu/hr = 0.12 lb/hr
0.12 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.53 ton/yr

SO_x Emissions
Emission Factor: 0.588 lb/MMScf (AP-42 Chapter 3, Table 3.2-3, 7/00)
Calculations: 0.588 lb/MMScf * 0.001 MMScf/MMBtu * 4.158 MMBtu/hr = 0.00 lb/hr
0.00 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.00 ton/yr

(Source #6a)
3.0 MMBtu/hr Direct Fired Dehydration Unit Regenerator (Reboiler)

Parameters
Boiler Heat Output: 540 BHp
Hours of Operation: 8760 hr/yr
Fuel Heating Value: 0.001 MMScf/MMBtu
Fuel Consumption: 3.0 MMBtu/hr * 0.001 MMScf/MMBtu * 8760 hr/yr = 26.28 MMScf/yr

PM_{10} Emissions
Emission Factor: 7.6 lb/MMScf (AP-42 Chapter 1, Table 1.4-2, 7/98)
Calculations: 7.6 lb/MMScf * 26.28 MMScf/yr * 0.0005 ton/lb = 0.10 ton/yr

NO_x Emissions
Emission Factor: 100 lb/MMScf (AP-42 Chapter 1, Table 1.4-1, 7/98)
Calculations: 100 lb/MMScf * 26.28 MMScf/yr * 0.0005 ton/lb = 1.31 ton/yr

CO Emissions
Emission Factor: 84 lb/MMScf (AP-42 Chapter 1, Table 1.4-1, 7/98)
Calculations: 84 lb/MMScf * 26.28 MMScf/yr * 0.0005 ton/lb = 1.10 ton/yr

VOC Emissions
Emission Factor: 5.50 lb/MMScf (AP-42 Chapter 1, Table 1.4-2, 7/98)
Calculations: 5.50 lb/MMScf * 26.28 MMScf/yr * 0.0005 ton/lb = 0.07 ton/yr

SO_x Emissions
Emission Factor: 0.60 lb/MMScf (AP-42 Chapter 1, Table 1.4-2, 7/98)
Calculations: 0.60 lb/MMScf * 26.28 MMScf/yr * 0.0005 ton/lb = 0.01 ton/yr

(Source #6b)
Dehydrator Still Vent

Parameters
Hours of Operation: 8760 hr/yr

VOC Emissions
Emission Factor: 0.025 lb/hr (GRI-GLYcalc, EPA Approved Still Vent Emission Estimation Program)
Calculations: 0.025 lb/hr * * 8760 hr/yr * 0.0005 ton/lb = 0.11 ton/yr

(Source #7)
Miscellaneous Tanks

Parameters
Hours of Operation: 8760 hr/yr

VOC Emissions
Emission Factor: 152.5 lb/yr (TANKS 4.0 Emission Estimation Program)
Calculations: 152.5 lb/yr * 0.0005 ton/lb = 0.076 ton/yr

(Source #8)
1,680-Hp Waukesha Compressor Engine

Parameters
Brake Horsepower: 1,680 BHp
Hours of Operation: 8760 hr/yr
Max Fuel Combustion Rate: 13.188 MMBtu/hr
Fuel Heating Value: 0.001 MMScf/MMBtu

PM_{10} Emissions
Emission Factor: 9.50 lb/MMScf (AP-42 Chapter 3, Table 3.2-3, 7/00)
Calculations: 9.50 lb/MMScf * 0.001 MMScf/MMBtu * 13.188 MMBtu/hr = 0.13 lb/hr
0.13 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.57 ton/yr

NO_x Emissions
Emission Factor: 2.00 gram/BHp-hr (BACT Determination)
Calculations: 2.00 gram/BHp-hr * 1,680 BHp * 0.002205 lb/gram = 7.41 lb/hr
7.41 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 32.46 ton/yr

CO Emissions
Emission Factor: 3.00 gram/BHp-hr (BACT Determination)
Calculations: 3.00 gram/BHp-hr *1,680 BHp * 0.002205 lb/gram = 11.11 lb/hr
11.11 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 48.66 ton/yr

VOC Emissions
Emission Factor: 1.00 gram/BHp-hr (BACT Determination)
Calculations: 1.00 gram/BHp-hr *1,680 BHp * 0.002205 lb/gram = 3.70 lb/hr
3.70 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 16.21 ton/yr

SO_x Emissions
Emission Factor: 0.588 lb/MMScf (AP-42 Chapter 3, Table 3.2-3, 7/00)
Calculations: 0.588 lb/MMScf * 0.001 MMScf/MMBtu * 13.188 MMBtu/hr = 0.01 lb/hr
0.01 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.04 ton/yr

(Source #9 – Source #26)
Building and Process Heaters (18)

Parameters
Heater Output (18 heaters): 2.68 MMBtu/hr
Hours of Operation: 8760 hr/yr
Fuel Heating Value: 0.001 MMScf/MMBtu
Fuel Consumption: 2.68 MMBtu/hr * 0.001 MMScf/MMBtu * 8760 hr/yr = 23.48 MMScf/yr

PM_{10} Emissions
Emission Factor: 7.6 lb/MMScf (AP-42 Chapter 1, Table 1.4-2, 7/98)
Calculations: 7.6 lb/MMScf * 23.48 MMScf/yr * 0.0005 ton/lb = 0.09 ton/yr

NO_x Emissions
Emission Factor: 100 lb/MMScf (AP-42 Chapter 1, Table 1.4-1, 7/98)
Calculations: 100 lb/MMScf * 23.48 MMScf/yr * 0.0005 ton/lb = 1.17 ton/yr

CO Emissions
Emission Factor: 84 lb/MMScf (AP-42 Chapter 1, Table 1.4-1, 7/98)
Calculations: 84 lb/MMScf * 23.48 MMScf/yr * 0.0005 ton/lb = 0.99 ton/yr

VOC Emissions
Emission Factor: 5.50 lb/MMScf (AP-42 Chapter 1, Table 1.4-2, 7/98)
Calculations: 5.50 lb/MMScf * 23.48 MMScf/yr * 0.0005 ton/lb = 0.06 ton/yr

SO_x Emissions
Emission Factor: 0.60 lb/MMScf (AP-42 Chapter 1, Table 1.4-2, 7/98)
Calculations: 0.60 lb/MMScf * 23.48 MMScf/yr * 0.0005 ton/lb = 0.01 ton/yr

(Source #27)
Fugitive VOC Emissions

Source (gas)	# of Sources	Factor (lb/hr/source)	TOC Emissions (lb/hr)	VOC Fraction (wgt %)	VOC Emissions (lb/hr)	(ton/yr)
Pump Seals	12	0.02866	0.34392	0.0361117	0.012	0.05
Valves	157	0.00992	1.55744	0.0361117	0.056	0.25
Connections	100	0.00044	0.044	0.0361117	0.001	0.01
Flanges	480	0.00086	0.4128	0.0361117	0.015	0.07
Open Ended Lines	30	0.00441	0.1323	0.0361117	0.005	0.02
TOTAL	779		2.49		0.09	0.40

V. Existing Air Quality

The facility is located in the Southeast ¼ of the Southeast ¼ of Section 12, Township 7 North, Range 59 East in Fallon County, Montana. The air quality of this area is classified as either Better than National Standards or unclassifiable/attainment for the National Ambient Air Quality Standards (NAAQS) for criteria pollutants.

VI. Ambient Air Impact Analysis

Aspen Consulting and Engineering (Aspen) submitted air dispersion modeling for NO_x emissions from the WBI Baker Compressor Station, on behalf of WBI, as part of Permit Application #2954-00. The modeling analysis utilized the ISC3 model.

WBI used 5 years of meteorological data (1987-1991) for the model. The surface data was collected at the Williston/Sloulin International Airport. Upper air data utilized for the model was taken from the Bismarck Airport. The receptor grid elevations were derived from digital elevation model (DEM) files using the United States Geological Survey (USGS) 7.5-minute series (1:24,000 scale) digitized topographical maps. The Baker, Baker NE, Morris Butte, and Buffalo Reservoir quadrangles in USGS's DEM file format were used to develop the receptor grid. The receptors were placed at 50-meter intervals along the fence line, 100-meter intervals from the fence line to 1 kilometer, and at 500-meter intervals from 1 kilometer to 10 kilometers. Additionally, a 500-meter by 1,000-meter "hot spot" receptor grid was placed around the modeled hot spot with 50 meter spacing on the south side of the facility.

Downwash was calculated using the EPA BPIP program. The building corner coordinates and peak roof heights were obtained from a WBI plot plan to determine the appropriate direction-specific building dimension parameters to use for each emission source modeled. The Bear Paw Energy-Baker Gas Plant NO_x sources were included in the model at the Department's request.

In the model, WBI made adjustments to the facility to assure compliance with the Montana Ambient Air Quality Standards (MAAQS) and WBI requested that the Department recognize the adjustments during the permitting process. Specifically, WBI requested that NO_x emissions from each of the two 330-Hp Ingersoll-Rand Compressor Engines be limited to 9.1 lb/hr. In addition, WBI requested that the stack heights of each of the two 330-Hp Ingersoll-Rand Compressor Engines and each of the three 540-Hp Cooper-Bessemer Compressor Engines be increased to a minimum of 35 feet above ground level. Without these changes, the sources were severely downwashed and the model predicted violations of the NAAQS/MAAQS. Therefore, the Department included the proposed stack heights and emission rates as conditions in Permit #2954-00 to ensure compliance with the ambient standards. The limits remain in Permit #2954-01.

The Ambient Ratio Method and the Ozone Limiting Method were applied to the NO_x emissions to convert the modeled concentrations to NO_2 for comparison to the NAAQS/MAAQS. The modeled concentrations were below the NAAQS/MAAQS. In the view of the Department, the amount of controlled emissions from this facility will still not cause or contribute to an exceedance of any ambient air quality standard because the current permit action does not result in an increase of emissions.

VII. Taking or Damaging Implication Analysis

As required by 2-10-105, MCA, the Department conducted a private property taking and damaging assessment and determined there are no taking or damaging implications.

VIII. Environmental Assessment

This permitting action will not result in an increase of emissions from the facility and is considered an administrative action; therefore, an Environmental Assessment is not required.

Analysis Prepared By: Dave Aguirre
Date: February 20, 2004